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HARDWARE ASSIST FOR YUV DATA FORMAT CONVERSION
TO SOFTWARE MPEG DECODER

ABSTRACT OF THE DISCLOSURE

A display controller assists a host processor in decoding MPEG data. The display controller receives YUV data in non-pixel video format from a host CPU and perform the otherwise CPU intensive task of rasterization

5   within the display controller. In addition, the display controller may use its internal BITBLIT engine to copy U and V data from one line in a BITBLIT operation to adjacent lines, so as to replicate U and V data. A byte mask preserves Y data on the adjacent lines from being

10   overwritten. At the end of the BITBLIT operation, the display controller generates a signal indicating that the frame buffer has been filled with new data, and thus display controller automatically switches to reading from the newly written frame buffer.